UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

# COAL REFERENCES INDEX

# FOR THE NAVAJO INDIAN RESERVATION
# ARIZONA, NEW MEXICO, AND UTAH

by

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This report is preliminary and
has not been reviewed for conformity
with U.S. Geological Survey
editorial standards. Any use of
trade names is for descriptive
purposes only and does not imply
endorsement by the USGS

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## Introduction

The references which are listed in this document represent the readily available literature about coal resources on or adjacent to the Navajo Indian Reservation. They were selected during the developmental phase of the Navajo Resource Information System (NRIS). The system contains a set of computerized data bases addressing various resource categories. The system was developed by the U.S. Geological Survey in coordination with the Minerals Department, Navajo Nation. Funding support was provided by the Bureau of Indian Affairs.

Literature is the foundation of resource assessment and the absence of such a compilation for the Navajo Nation prompted the development of a reference data base entitled "nref," which consists of over 1300 records. The following reference list of approximately 70 references was selected from those citations which contain "coal" in a keyword list attached to each citation. References to general literature on this topic may also be present.

The main attempt was to list most of the literature published in the 1960's and 1970's for areas in, or adjacent to, the Navajo Reservation. References published prior to this were included only if readily available or if they seemed to represent areas or topics not covered in later publications. We hope most of the historical literature not given within this list will be found in the bibliographies of the papers cited.

The areas and topics of interest to the Navajo Nation are identical to a large amount of the historical geologic work conducted by others on the Navajo Reservation. The index which follows represents the first attempt at compiling this large body of work and we, therefore, regret

the omission of any important works which we might have missed. Readers of this document are encouraged to inform the Minerals Department, Navajo Nation of any omissions or errors. Copies of reports, reprints, etc., applicable to the Navajo Reservation would be appreciated as well. Please send to: Minerals Department, P.O. Box 146, Window Rock, AZ 86515.

## Rules used in the Reference List

Each reference is composed of author, year, title, publishing agency, place of publication and collation, in that order, as follows:

Author--may be editor(s), compiler(s), or multiple authors. In the latter case, articles with more than three authors will be given with "et al." following the initial author's name. In most cases, first and middle names are abbreviated.

Year--the year of publication.

Title--may be of a book, an article in a guidebook, a compilation, or an article in a journal publication. Secondary titles which follow the publishing agency can be the name of a compilation of papers. Editors of compilations may be given as well. Organizational names are given before the secondary titles of memoirs, guidebooks, etc.

Publishing agency--may be a publishing house, a governmental agency (federal or state), or professional or technical journal. The type of publication (memoir, bulletin, guidebook), the editor, or field conference number will also be given when appropriate.

Collation--volume and number of a serial publication and inclusive pagination will be given. Total number of pages will be given, if available, for books. If the reference is to a selected part of a publication, this will be indicated by page intervals. If pages were not counted or publication is unpaginated, [unpaginated] will appear.

## Abbreviation Standards

International abbreviation standards prepared by the National Clearinghouse for Periodic Title Word Abbreviations Service, Ohio State University, have been used in most cases. This has reduced the length of most citations. However, to prevent possible misinterpretations, two lists of abbreviations are given. The first, located in appendix A, gives general abbreviations for one or two words. The second list, located in appendix B, gives abbreviations for organizations and the full title for which they stand.

## Acknowledgments

This compilation was completed with the assistance of the staff of the Minerals Department, Navajo Nation at Window Rock. Augustine Blackgoat, the staff geologist for coal, was particularly helpful.

## REFERENCES ON COAL

Arizona Bureau of Mines, 1977, Chemical analyses of coal samples from the Black Mesa Field, Arizona: Ariz. Bur. Mines Circ. 18, 14p.

Arnold, J.M., 1969, Discovery and development of Peabody Coal Company's Black Mesa Mine: Soc. Min. Eng. of AIME Preprint no. 69-F-349, 18p.

Arnold, E.C., 1980, New Mexico's energy resources '79: N.M. Bur. Mines Miner. Resour. Ann. Rep., 55p.

Averitt, P., 1965, The future of coal production in the Rocky Mountain region: Econ. Geol., v. 60, no. 2, p. 351-359.

Averitt, P., 1966, Coking coal deposits of the Western United States: U.S. Geol. Surv. Bull. 1222-G, 48p.

Averitt, P., 1968, Stripping coal resources of the United States: U.S. Geol. Surv. Bull. 1252-C, 20p.

Averitt, P., 1969, Coal resources of the United States: U.S. Geol. Surv. Bull. 1275, 116p.

Averitt, P., and Lopez, L., 1972, Bibliography and index of U.S. Geological Survey publications relating to coal 1882-1970: U.S. Geol. Surv. Bull. 1377, 173p.

Averitt, P., and O'Sullivan, R.B., 1969, Coal: Ariz. Bur. Mines Bull. 189, p. 59-69.

Bachman, G.O., et al., 1959, Uranium-bearing coal and carbonaceous shale in the La Ventana Mesa area, Sandoval County, New Mexico: U.S. Geol. Surv. Bull. 1055-J, p. 295-307.

Beach, L.J., and Jentgen, R.W., 1978, Coal test drilling for the San Juan mine extension, San Juan County, New Mexico: U.S. Geol. Surv. Open-File Rep. 78-960, 87p.

Beaumont, E.C., 1955, Preliminary geologic map of the Shiprock and Hogback quadrangles, San Juan County, New Mexico: U.S. Geol. Surv. Coal Invest. Map C-29.

Beaumont, E.C., 1968, Coal-bearing formations in the western part of the San Juan Basin of New Mexico: N.M. Geol. Soc. Guideb., San Juan-San Miguel-La Plata region, 19th Field Conf., p. 33-40.

Beaumont, E.C., 1971, The impact of coal on northwestern New Mexico: N.M. Bur. Mines Miner. Resour. Mem. 25, Strippable low-sulfur coal resources in New Mexico and Colorado, p. 172-175.

Beaumont, E.C., 1971, Stratigraphic distribution of coal in San Juan Basin: N.M. Bur. Mines Miner. Resour. Mem. 25, Strippable low-sulfur coal resources in New Mexico and Colorado, p. 15-30.

Beaumont, E.C., Shoemaker, J.W., and Kottlowski, F.C., 1971, Stratidynamics of coal deposition in southern Rocky Mountain region, U.S.A.: N.M. Bur. Mines Miner. Resour. Mem. 25, Strippable low-sulfur coal resources in New Mexico and Colorado, p. 175-185.

Beaumont, E.C., Shoemaker, J.W., and Stone, W.J., compilers, 1976, Guidebook to coal geology of Northwest New Mexico: N.M. Bur. Mines Miner. Resour. Circ. 154, 58p.

Beaumont, E.C., and Shoemaker, J.W., 1977, Geometry of coal beds in San Juan Basin, New Mexico: Am. Assoc. Pet. Geol. Bull., v. 61, no. 5, p. 765.

Bierei, G.R., 1977, The environment and coal development in the San Juan Basin, New Mexico: N.M. Geol. Soc. Guideb., San Juan Basin III, 28th Field Conf., p. 77-82.

Campbell, M.K., 1904, The Deer Creek Coal Field: U.S. Geol. Surv. Bull. 225, p. 240-258.

Campbell, M.K., and Gregory, H.E., 1911, The Black Mesa coal field, Arizona: U.S. Geol. Surv. Bull. 431-B, p. 229-238.

Council of Energy Resource Tribes, 1979, The control and reclamation of surface mining on Indian lands: U.S. Dep. Inter., Off. Surf. Min. Reclam., 280p.

Cannon, H.L., and Swanson, V.E., 1975, Contribution of major and minor elements to soil and vegetation by the coal-fired Four Corners Power Plant, San Juan County, New Mexico: U.S. Geol. Surv. Open-File Rep. 75-170, 36p.

Dane, C.H., 1936, The La Ventana-Chacra Mesa coal field, pt. 3 of Geology and fuel resources of the southern part of the San Juan Basin, New Mexico: U.S. Geol. Surv. Bull. 860-C, p. 81-161.

Dames & Moore, 1979, Coal resource occurrence and coal development potential maps of the Kirtland SE quadrangle, San Juan County, New Mexico: U.S. Geol. Surv. Open-File Rep. 79-0802, 8 maps, 23p.

Dames & Moore, 1979, Coal resource occurrence and coal development potential maps of the Hugh Lake quadrangle, San Juan County, New Mexico: U.S. Geol. Surv. Open-File Rep. 79-0803, 14 maps, 23p.

Dames & Moore, 1979, Coal resource occurrence and coal development potential maps of the Pillar quadrangle, San Juan County, New Mexico: U.S. Geol. Surv. Open-File Rep. 79-0804, 29 maps, 30p.

Dames & Moore, 1979, Coal resource occurrence and coal development potential maps of the Moncisco Wash quadrangle, San Juan County, New Mexico: U.S. Geol. Surv. Open-File Rep. 79-0805, 28 maps, 28p.

Dames & Moore, 1979, Coal resource occurrence and coal development potential maps of the Carson Trading Post quadrangle, San Juan County, New Mexico: U.S. Geol. Surv. Open-File Rep. 79-0806, 17 maps, 28p.

Day, A.D., Tucker, T.C., and Thames, J.L., 1979, Reclamation and water relations of strip mine spoils in northern Arizona (1976-1978): U.S. Environ. Prot. Agency Res. Rep. Ser. EPA-600/7-79-258, 46p.

Denson, N.M., et al., 1959, Uranium in coal in the Western United States: U.S. Geol. Surv. Bull. 1055, 315p.

Dove, F.H., 1973, Simulation of the effects of coal power developments in the Four Corners region: Univ. Ariz., Ph.D. dissertation, 133p. [Groundwater in the Navajo Sandstone]

Dumble, E.T., 1902, A carboniferous coal in Arizona: Am. Geol., v. 30, no. 4, p. 270.

Eychaner, J.H., 1981, Geohydrology and effects of water use in the Black Mesa Area, Navajo and Hopi Indian Reservations, Arizona: U.S. Geol. Surv. Open-File Rep. 81-911, 46p.

Fassett, J.E., 1977, Stratigraphy of the coals of the San Juan Basin: Colo. Geol. Surv. Resour. Ser. 1, Geology of Rocky Mountain coal--proceedings of the 1977 symposium; p. 61-71.

Flores, R.M., 1980, Comparison of depositional models of Tertiary and upper Cretateous coal-bearing rocks in some western interior basins of the United States: Colo. Geol. Surv. Resour. Ser. 10, Symposium on the Geology of Rocky Mountain Coal, 4th, 1980, Proceedings, p. 17-20.

Gardner, J.H., 1909, The coal field between Gallup and San Mateo, New Mexico: U.S. Geol. Surv. Bull. 341, p. 364-378.

Gould, W.L., Rai, Dhanpat, and Wierenga, P.J., 1975, Problems in reclamation of coal mine spoils in New Mexico, in Practices and problems of land reclamation in western North America: Univ. N.D. Press, Grand Forks, p. 107-121.

Hodgson, H.E., ed., 1978, Proceedings of the second symposium on the geology of Rocky Mountain coal-1977: Colo. Geol. Surv. Resour. Ser. 4, 219p.

Hounslow, A., and Fitzpatrick, J., 1978, Overburden mineralogy as related to ground-water chemical changes in coal strip mining: U.S. Environ. Prot. Agency Res. Rep. Ser. EPA-600/7-78-156, 22p.

Hinds, J.S., 1964, BTU values of Fruitland Formation coal deposits in Colorado and New Mexico: U.S. Geol. Surv. Prof. Pap 501-D, p. 90-94.

Hunt, C.B., 1936, The Mount Taylor coal field: U.S. Geol. Surv. Bull. 860-B, p. 31-80.

Karna, W.W., 1977, Utah International's Navajo mine: N.M. Geol. Soc. Guideb., San Juan Basin III, 28th Field Conf., p. 251-252.

Keyes, C.R., 1941, Navajo coal measures on northwestern New Mexico Laramian: Pan-Am. Geol., v. 54, no. 4, p. 309-310.

Kottlowski, F.E., 1964, The economic geology of coal in New Mexico: N.M. Univ. Bus. Circ. 71, 11p.

Kottlowski, F.E., and Beaumont, E.C., 1965, Coal: N.M. Bur. Mines Miner. Resour. Bull. 87, Mineral and water resources of New Mexico, p. 100-116.

Landis, E.R., 1959, Coal resources of Colorado: U.S. Geol. Surv. Bull. 1072-C, p. 131-232.

Landis, E.R., Dane, C.H., and Cobban, W.A., 1974, Cretaceous rocks of the Tierra Amarilla coal field and adjacent areas, Rio Arriba County, New Mexico: N.M. Geol. Soc. Guideb., Ghost Ranch, 25th Field Conf., p. 231-238.

Mack, G.A., Suttner, L.J., and Jennings, J.R., 1979, Permo-Pennsylvanian climatic trends in the ancestral Rocky Mountains: Four Corners Geol. Soc. Guideb.--Permianland, 9th Field Conf, p. 7-12.

Meissner, F.F., 1977, Coal as a major source of dry natural gas with example from two Rocky Mountain basins, San Juan and Raton: Colo. Geol. Surv. Resour. Ser. 1, Geology of Rocky Mountain coal--proceedings of the 1976 symposium, p. 174-175 (abstr.)

O'Sullivan, R.B., 1955, Preliminary geologic map of the Naschitti quadrangle, San Juan and McKinley Counties, New Mexico: U.S. Geol. Surv. Coal Invest. Map C-31.

O'Sullivan, R.B., 1980, Measured stratigraphic section of the upper coal-bearing part of the Cretaceous Menefee Formation in the Kin Klishin Ruins quadrangle of northwestern New Mexico: U.S. Geol. Surv. Open-File Rep. 80-184, 34p.

Peirce, H.W., Keith, S.B., and Wilt, J.C., 1970, Coal, oil, natural gas, helium, and uranium in Arizona: Ariz. Bur. Mines Bull. 182, 289p.

Peterson, F., and Waldrop, H.A., 1965, Jurassic and Cretaceous stratigraphy of south-central Kaiparowits Plateau, Utah: Utah Geol Soc. Guideb., Geology of Utah and resources of south-central Utah - resources for power, no. 19, p. 47-69.

Rahfuse, R.V., Goff, G.B., and Liberatore, A.J., 1974, Noncoking coal gasified in a stirred-bed producer: U.S. Bur. Mines Tech. Prog. Rep. 77, 8p.

Rai, Dhanpat, Wierenga, P.J., and Gould, W.L., 1975, Chemical and physical properties of soil samples from a coal-bearing formation in San Juan County, New Mexico: N.M. State Univ., Las Cruces, Agric. Exp. Stat. Res. Rep. 294, 24p.

Read, C.B., Duffner, R.T., Wood, G.H, and Zapp, A.D., 1950, Coal resources of New Mexico: U.S. Geol. Surv. Circ. 89, 24p.

Savanick, G.A., 1979, Borehole (slurry) mining of coal and uraniferous sandstone: AIME Ann. Meet., New Orleans, La., Feb. 18-22, Preprint 79-53.

Schneider, G.B., and Kirschbaum, M.A., 1981, Coal resources of the Fruitland Formation, Ojo Encino EMRIA study site, McKinley County, New Mexico: U.S. Geol. Surv. Open-File Rep. 81-0783, 26p.

Schrader, F.C., 1906, The Durango-Gallup coal field of Colorado and New Mexico: U.S. Geol. Surv. Bull. 285, p. 241-258.

Sears, J.D., 1925, Geology and coal resources of the Gallup-Zuni Basin, New Mexico: U.S. Geol. Surv. Bull. 767, 52p.

Sears, J.D., 1934, The coal fields from Gallup eastward toward Mount Taylor, with a measured section of pre-Dakota (?) rocks near Navajo Church: U.S. Geol. Surv. Bull. 860-A, p. 1-29.

Severson, R.C., and Gough, L.P., 1981, Geochemical variability of natural soils and reclaimed mine-spoil soils in the San Juan Basin, New Mexico: U.S. Geol. Surv. Prof. Pap. 1134-C, 39p.

Shaler, M.K., 1907, A reconnaissance survey of the western part of the Durango-Gallup coal field of Colorado and New Mexico: U.S. Geol. Surv. Bull. 316, p. 376-426.

Shantz, R., 1978, Washability test and heat-content prediction for New Mexico coals: N.M. Bur. Mines Miner. Prog. Rep. 10, 16p.

Shneider, G.B., Haldenbrand, R.T., and Affolter, R.H., 1979, Coal resources and chemical analyses of coal from the Fruitland Formation, Kimbeto EMRIA site, San Juan County, New Mexico: U.S. Geol. Surv. Open-File Rep. 79-1090, 35p.

Shomaker, J.W., Beaumont, E.C., and Kottlowski, F.E., eds., 1971, Strippable low-sulfur coal resources of the San Juan Basin in New Mexico and Colorado: N.M. Bur. Mines Miner. Resour. Mem. 25, Strippable low-sulfur coal resources in New Mexico and Colorado, 189p.

Shomaker, J.W., and Stone, W.J., 1976, Availability of ground water for coal development in San Juan Basin, New Mexico: N.M. Bur. Mines Miner. Resour. Circ. 154, p. 43-48.

Shomaker, J.W., and Whyte, M.R., 1978, Geologic appraisal of deep coals, San Juan Basin, New Mexico: N.M. Bur. Mines Miner. Resour. Circ. 155, 39p.

Siemers, C.T., 1978, Generation of a simplified working depositional model for repetitive coal-bearing sequences using field data--an example from the upper Cretaceous Menefee Formation (Mesa Verde Group), northwestern New Mexico: Colo. Geol. Surv. Resour. Ser. 4, Symposium on the Geology of Rocky Mountain Coal, 2d, 1977, Proceedings, p. 1-22.

Somerton, W.H., Soylemezoglu, I.M., and Dudley, R.C., 1975, Effects of stress on permeability of coal: Int. J. Rock Mech. Min. Sci., v. 12, no. 5-6, p. 129-145.

Tabet, D.E., 1977, The relationship between coal and petroleum in the San Juan Basin, New Mexico: Geol. Soc. Am. Abstr., v. 9, no. 1, p. 76-77.

Tabet, D.E., 1977, Reclamation of coal surface-mined lands in New Mexico: N.M. Bur. Mines Miner. Resour. Ann. Rep. July 1, 1976 to June 30, 1977, p. 81-85.

Thames, J.L., and Verma, T.R., 1975, Coal mine reclamation on the Black Mesa and the Four Corners area of northeastern Arizona, Practices and problems of land reclamation in western North America: Univ. N.D. Press, Grand Forks, p. 48-64.

Toy, T.J., and Munson, B.E., 1979, Climatic appraisal maps of the rehabilitation potential of strippable coal lands in the Four Corners area, Arizona, Colorado, New Mexico, and Utah: U.S. Geol. Surv. Misc. Field Stud. Map MF-1098.

U.S. Bureau of Indian Affairs, 1977, Draft environmental statement Navajo-El Paso/consolidation coal lease and mining plan, Navajo Reservation, San Juan County, New Mexico: U.S. Dep. Int., Bur. Indian Aff. INT DES 76-20, [unpaginated].

U.S. Bureau of Reclamation, 1977, Final environmental statement El Paso coal gasification project, San Juan County, New Mexico: U.S. Dep. Int., Bur. Reclam. INT FES 77-02, 2 v., [unpaginated].

U.S. Geological Survey, 1978, Progress report on Black Mesa monitoring program, 1977: U.S. Geol. Surv. Open-File Rep. 78-459, 38p.

U.S. Geological Survey, et al., 1969, Mineral and water resources of Arizona: U.S. Senate Comm. on Inter. Insular Aff., 90th Cong., 2d Session, 638p.

Wells, S.G., 1981, Environmental geology and hydrology in New Mexico: N.M. Geol. Soc. Spec. Pub. 10, 152p.

Whyte, M.R., and Shoemaker, J.W., 1977, A geological appraisal of the deep coals of the Menefee Formation of the San Juan Basin, New Mexico: N.M. Geol. Soc. Guideb., Supplement to San Juan Basin III, 28th Field Conf., p. 41-48.

Williams, G.A., 1951, The coal deposits and Cretaceous stratigraphy of the western part of Black Mesa: Univ. Ariz., Tucson, Ph.D. dissertation, 307p.

Wilson, A.M., 1963, New coal strip mining in the southwest: Min. Cong. J., v. 49, no. 1, p. 19-21.

Wilson, W.L., and Livingston, A.L., 1980, Stratigraphy and coal resources of Dakota Sandstone in Sage Plain, Southwest Colorado and Southeast Utah: Colo. Geol. Surv. Resour. Ser. 10, Symposium on the Geology of Rocky Mountain Coal, 4th, 1980, Proceedings, p. 17-20.

## Appendix A

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|---|---|
| Abstract | Abstr. |
| Academy | Acad. |
| Administration | Ad. |
| American | Am. |
| Annual | Ann. |
| Appendix | Append. |
| Arizona | Ariz. |
| Association | Assoc. |
| Bulletin | Bull. |
| Bureau | Bur. |
| Doctoral | Ph.D. |
| Circular | Circ. |
| Congress | Congr. |
| Commission | Comm. |
| Department | Dep. |
| Dissertation | Dissert. |
| Economic | Econ. |
| Engineering | Eng. |
| Geological | Geol. |
| Geologists | Geol. |
| Geophysical | Geophys. |
| Guidebook | Guideb. |
| History | Hist. |
| Hydrology | Hydrol. |
| Intermountain | Intermtn. |
| International | Int. |
| Investigations | Invest. |
| Journal | J. |
| Meeting | Meet. |
| Memoir | Mem. |
| Mineral | Miner. |
| Mineralogist | Mineral. |
| Miscellaneous | Misc. |
| Museum | Mus. |
| New Mexico | N.M. |
| Number | No. |
| Paper | Pap. |
| Part | Pt. |
| Paleontology | Paleontol. |
| Petroleum | Pet. |
| Petrology | Petrol. |
| Preliminary | Prelim. |
| Professional | Prof. |
| Publication | Pub. |
| Report | Rep. |
| Radioactive | Radioact. |
| Research | Res. |
| Mineralogy | Mineral. |
| Mining | Min. |
| Resources | Resour. |
| Section | Sect. |
| Series | Ser. |
| Society | Soc. |
| Studies | Stud. |
| Special | Spec. |
| Survey | Surv. |
| Symposium | Symp. |
| United States | U.S. |
| University | Univ. |
| Geological Survey | Geol. Surv. |
| Vertebrate | Vertebr. |
| Washington | Wash. |

## Appendix B

The follow list* gives abbreviations for organizations, journals, etc. which have been used in the bibliographic data base. Additional items which may follow the initial entry are given in parentheses.

AIME--American Institue of Mining, Metallurgical, and Petroleum Engineers (Ann. Meet.--Annual Meeting; Trans.--Transactions)

Agric. Exp. Stat. Res. Rep.--Agriculture Experimental Station Research Report

Am. Assoc. Pet. Geol.--American Association of Petroleum Geologists (Ann. Meet.--Annual Meeting; Bull.--Bulletin; Mem.--Memoir; Repr. Ser.--Reprint Series; Rocky Mtn. Sect., Ann. Meet.--Rocky Mountain Section, Annual Meeting; Rocky Mtn. Sect., Guideb.--Rocky Mountain Section, Guidebook; Symp.--Symposium)

Am. Geol.--American Geology

Am. J. Sci.--American Journal of Science

Am. Mineral.--American Mineralogist

Am. Mus. Nat. Hist. Bull.--American Museum of Natural History Bulletin (New York)

Ariz. Acad. Sci. J.--Arizona Academy of Science Journal

Ariz.-Nev. Acad. Sci. J.--Arizona-Nevada Academy of Science Journal

Ariz. Bur. Geol. Miner. Tech.--Arizona Bureau of Geology and Mineral Technology

Ariz. Bur. Mines--Arizona Bureau of Mines (Bull.--Bulletin; Circ.--Circular)

Ariz. Geol. Soc. Dig.--Arizona Geological Society Digest

Ariz. Oil & Gas Conserv. Comm. --Arizona Oil and Gas Conservation Commission (Geol. Rep.--Geological Report; Spec. Pub.--Special Publication)

Bendix Field Eng. Corp. (for DOE)--Bendix Field Engineering Corportion (for Department of Energy)

Bot. Soc. Am. Guideb.--Botanical Society of America Guidebook

Brigham Young Univ. Geol. Stud.--Brigham Young University Geology Studies

Calif. Oil World--California Oil World

Chem. Geol.--Chemical Geology

Colo. Geol. Surv. Resourc. Ser.--Colorado Geological Survey Resource Series

Contrib. Mineral. Petrol.--Contributions to Mineralogy and Petrology

Counc. Energy Resour. Tribes--Council of Energy Resources Tribes

*note: This list is applicable for the full reference database.

Cushman Found. Foraminiferal Res. Contrib.--Cushman Foundation for Foraminiferal Research Contribution

Dtsch. Gemmol. Ges. Zeit.--Deutsche Gemmologische Gesellshaft Zeitschrift

Diss. Abstr. Int.--Dissertations Abstract International

Earth Planet. Sci. Letter--Earth and Planetary Science Letters

Earth Sci. Bull.--Earth Science Bulletin (Wyoming Geological Association)

Econ. Geol.--Economic Geology

Elect. Power Res. Inst.-- Electric Power Research Institute

Eng. Mining J.--Engineering and Mining Journal

EOS (Am. Geophys. Union Trans.)--EOS (American Geophysical Union Transactions)

Four Corners Geol. Soc.--Four Corners Geological Society (Field Conf.--Field Conference; Mem.--Memoir)

Geochim. Cosmochim. Acta--Gechimica et Cosmochimica Acta

Geol.--Geology (Geol. Soc. Am.)

Geol. Soc. Am.--Geological Society of America (Abstr.--Abstracts; Bull--Bulletin; Mem.--Memoir; Spec. Pap.--Specal Paper; Rocky Mt. Sect. Abstr.--Rocky Mountain Section Abstracts; Rocky Mt. Sect. Ann. Meet.-- Rocky Moutain Section Annual Meeting; Rocky Mt. Sect. Guideb.--Rocky Mountain Section Guidebook)

Geol. Surv. Can. Pap.--Geological Survey of Canada Paper

Inst. Min. Met., London--Institution of Mining and Metallurgy, London

Intermt. Assoc. Pet. Geol.--Intermountain Association of Petroleum Geologists (Field Conf.--Field Conference; Guideb.--Guidebook; Symp.-Symposium)

Int. Assoc. Hydrol. Pub.--International Association of Hydrologists Publication

Int. Assoc. Pet. Geol. Symp.--International Association of Petroleum Geologists Symposium

Int. J. Rock Mech. Min. Sci.--International Journal of Rock Mechanics and Mining Sciences

IAEA--Internation Atomic Energy Agency

J. Geochem. Expl.--Journal of Geochemical Exploration

J. Geophys. Res.--Journal of Geophysical Research

J. Less Common Metals--Journal of Less Common Metals

J. Paleontol.--Journal of Paleontology

J. Sed. Pet.--Journal of Sedimentary Petrology

J. Soil Water Conserv.--Journal of Soil and Water Conservation

Min. Congr. J.--Mining Congress Journal

Min. Mag.--Mining Magazine

Min. J.--Mining Journal (London)

Mus. North. Ariz. Bull.--Museum of Northern Arizona Bulletin

Mt. Geol.--(The) Mountain Geologist

Nev. Bur. Mines Geol. Rep.--Nevada Bureau of Mines and Geology Report

N.M. Acad. Sci. Bull.--New Mexico Academy of Science Bulletin

N.M. Bur. Mines Miner. Resour.--New Mexico Bureau of Mines and Mineral Resources (Ann. Rep.--Annual Report; Bull.--Bulletin; Circ.--Circular; Mem.--Memoir; Open-File Rep.--Open-File Report; Prog. Rep.--Progress Report)

N.M. Geol.--New Mexico Geology

N.M. Geol. Soc.--New Mexico Geological Society (Guideb.--Guidebook; Spec. Pub.--Special Publication)

N.M. State Eng. Tech. Rep.--New Mexico State Engineer Technical Report

N.M. Univ. Pub. Geol.-- University of New Mexico Publication on Geology

N.M. Univ. Bus. Circ.-- University of New Mexico Business Circular

N.M. Water Resour. Res. Inst. Rep.--New Mexico Water Resources Research Institute Report

Off. Arid Lands Stud., Univ. Ariz.--Office of Arid Lands Study, University of Arizona

Oil Gas J.--Oil and Gas Journal

Pan-Am. Geol.--Pan-American Geologist

Pet. Eng. Int.--Petroleum Engineer International

Rocky Mt. Assoc. Geol. Guideb. --Rocky Mountain Association of Geologists Guidebook (Denver)

Sask. Geol. Soc. Spec. Pub.--Saskatchewan Geological Society Special Publication

Sci.--Science

Seismol. Soc. Am. Bull.--Seismology Society of America Bulletin

Soc. Econ. Paleontol. Mineral., --Society of Economic Paleontologists and Mineralogists (Rocky Mtn. Sect.--Rocky Mountain Section; Spec. Publ.-- Special Publication)

Soc. Pet. Eng.--Society of Petroleum Engineers

Soc. Verteb. Paleon. Field Conf.--Society of Vertebrate Paleontology Field Conference

South. Calif. Paleontol. Soc. Bull.--Southern California Paleontological Society Bulletin
Tex. Bur. Econ. Geol.--Texas Bureau of Economic Geology

Utah Geol.--Utah Geology

Utah Geol. Mineral. Surv.--Utah Geological and Mineralogical Survey (Bull.-Bulletin; Rep. Invest.--Report of Investigation; Spec. Stud.--Special Study; Circ--Circular; Guideb.--Guidebook)
Utah Geol. Soc.--Utah Geological Society (Guideb.--Guidebook)

Utah Univ. Press--University of Utah Press

U.N. Int. Conf. Peaceful Uses At. Energy--United Nations International Conference on the Peaceful Uses of Atomic Energy
USAEC--United State Atomic Energy Commission (Guideb.--Guidebook; GJO--Grand Junction Office;RMO--Report; RME-Report)
U.S. Bur. Indian Aff.--United States Bureau of Indian Affairs

U.S. Bur. Mines--United States Bureau of Mines (Inf. Circ.--Information Circular; Tech. Prog. Rep.--Technical Progress Report)
U.S. Bur. Reclam.--United States Bureau of Reclamation

U.S. ERDA GJO--United States Energy Research and Development Agency, Grand Junction Office (Final Rep.--Final Report)
U.S. Environ. Prot. Agency Res. Rep. Ser.--United States Environmental Protection Agency Research Reporting Series
U.S. Dep. Agric. Soil Conserv. Serv.--United State Department of Agriculture Soil Conservation Service.
U.S. Dep. Inter., Off. Surf. Min. Reclam. Enforcement--United States Department of Interior, Office of Surface Mining Reclamation Enforcement
U.S. Geol. Surv.--United States Geological Survey (Ann. Rep.--Annual Report; Bull.--Bulletin; Circ.--Circular; Coal Invest. Map--Coal Investigations Map; Geol. Quad. Map--Geologic Quadrangle Map; Geophys. Inv. Map--Geopohysical Investigation Map; Miner. Inv. Field Stud. Map--Mineral Investigations Field Studies Map; Misc. Geol. Inv. Map--Miscellaneous Geologic Investigations Map; Open-File Rep.--Open-File Report; Prof. Pap.--Professional Paper; TEI Rep.--Trace Element Investigation Report; TEM--Trace Element Memorandum; Water-Supply Pap.--Water-Supply Paper)
U.S. NASA Spec. Pub.--United State National Air and Space Adminstration Special Publication
Wash. Acad. Sci. J.--Washington Academy of Science Journal

West. Oil Rep.--Western Oil Reporter

Wyo. Univ. Contr. Geol.--University of Wyoming Contributions to Geology

Wyo. Geol. Assoc. Guideb.--Wyoming Geological Association Guidebook